

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A transgenic non-human mammal selected from the group consisting of bovine, horse, pig, goat, rabbit, dog, cat, mouse, rat, hamster, and guinea pig, comprising a transferred recombinant mouse GANP gene or human GANP gene encoding and expressing a protein of SEQ ID NO: 2 or 4 or progeny thereof encoding and expressing said protein, wherein said transgenic non-human mammal produces high affinity antibody-producing B cells.

2. (Previously Presented) The transgenic non-human mammal according to claim 1, wherein the GANP gene is expressed in B cells of the transgenic non-human mammal, or its progeny.

3-4. (Canceled)

5. (Currently Amended) A part of a transgenic non-human mammal selected from the group consisting of bovine, horse, pig, goat, rabbit, dog, cat, mouse, rat, hamster, and guinea pig, comprising a transferred recombinant mouse GANP gene or human GANP gene encoding and expressing a protein of SEQ ID NO: 2 or 4, or progeny thereof encoding and expressing said protein, wherein said part of the transgenic non-human mammal produces high affinity antibody-producing B cells.

6. (Previously Presented) A method of producing a high affinity antibody, comprising:
administering an antigen to the transgenic non-human mammal according to claim 1 or its progeny;
waiting for a time sufficient for said non-human mammal to generate antibodies to said antigen; and
recovering the antibody from the resultant mammal or progeny.

7-11. (Cancelled)

12. (Previously Presented) A high affinity-antibody producing cell which is taken from a transgenic non-human mammal selected from the group consisting of bovine, horse, pig, goat, rabbit, dog, cat, mouse, rat, hamster, and guinea pig, comprising a transferred recombinant mouse GANP gene or human GANP gene encoding and expressing a protein comprising SEQ ID NO: 2 or 4, or progeny thereof encoding and expressing said protein and wherein said transgenic mammal or its progeny has been administered an antigen.

13. (Previously Presented) The method according to claim 6, comprising:
obtaining blood from the mouse after administration of the antigen, separating and purifying antibodies from the blood to recover the antibody.

14. (Previously Presented) The method according to claim 6, wherein the antigen is administered two to three times at intervals of from 7 to 30 days.

15. (Previously Presented) The method according to claim 6, wherein an administration dose of the antigen is from 0.05 mg to 2 mg.

16. (Previously Presented) The method according to claim 6, wherein the route of administration is subcutaneous, dermal, intraperitoneal, intravenous or intramuscular.

17. (Previously Presented) The transgenic non-human mammal according to claim 1, wherein said GANP gene is operably linked to a human IgG enhancer, or its progeny.

18. (Previously Presented) The method according to claim 6, wherein said GANP gene is operably linked to a human IgG enhancer.

19. (Previously Presented) The cell according to claim 12, wherein said GANP gene is operably linked to a human IgG enhancer, or its progeny.